Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Final

AIR QUALITY PERMIT

Issued under 401 KAR 52:030

Permittee Name:	**Messier-Bugatti USA LLC**
Mailing Address:	**One Carbon Way, Walton, Kentucky 41094**
Source Name:	**Messier-Bugatti USA LLC**
Mailing Address:	**One Carbon Way, Walton, Kentucky 41094**
Source Location:	**One Carbon Way, Walton, Kentucky 41094**
Permit ID:	**F-07-006, Initial**
Agency Interest #:	**137**
Activity ID:	**APE20060003**
Review Type:	**Conditional Major, Construction / Operating**
Source ID:	**21-015-00125**
Regional Office:	**Florence Regional Office** **8020 Veterans Memorial Drive, Suite 110** **Florence, KY 41042** **(859) 525-4923**
County:	**Boone**
Application Complete Date:	**January 17, 2007**
Issuance Date:	**May 4, 2007**
Revision Date:	
Expiration Date:	**May 4, 2012**

John S. Lyons, Director
Division for Air Quality

Revised 09/29/06

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Rev #	Permit type	APE#	Complete Date	Issuance Date	Summary of Action
----	**Initial Issuance**	**20060003**	**1/17/07**		**Initial Conditional Major Issuance**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS:

05 (07) Intermediate Machining (IM)

Description:

This emission point processes brake pre-forms that have undergone carbonization in the carbonizing and infiltrating furnaces. The machining rate of brake pre-forms is approximately 394 TPY. A 99.9% efficient baghouse controls the emissions. Construction commenced: September 10, 1998.

06 (08) Finishing Machines (FM)

Description:

This emission point finishes brake pre-forms into final products. The maximum rate of finishing waste produced is 403 TPY. A 99.9% efficient baghouse controls the emissions.

Construction commenced: September 10, 1998, and January 26, 2001.

17 (17) Refurbishing Machines Center (RFPC)

Description:

This emission point will take used brake disks that are received from the field and remachine the wear surfaces to current specifications. A 99% efficient baghouse and a 95% efficient fabric filter will be used to control particulate emissions. Construction commenced: April 2002.

APPLICABLE REGULATIONS:

401 KAR 59:010. New process operations, which commenced on or after July 2, 1975. Applicable to particulate and visible emissions each emission point.

1. Operating Limitations:

The permittee shall operate the associated baghouse and fabric filter at all times in each unit when the process is in operation.

Compliance Demonstration: Pursuant to 401 KAR 50:055, records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3, opacity shall not exceed 20%.

b. Pursuant to 401 KAR 59:010, Appendix A, The emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

For process rates up to 1,000 lbs/hr: $E = 2.34$

For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$

For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration:

401 KAR 59:010, New process operations:

i. To provide reasonable assurance that the particulate matter emission limitations (PM and PM_{10}) are being met, the permittee shall monitor the amount and type of process weight added to each particulate matter emissions unit. The process weight shall be determined as the average hourly tons added to the emission unit averaged over a one-month period. Average particulate emissions shall be calculated as follows:

Hourly Emission Rate = [Monthly processing rate x Emission Factor as determined from AP-42 * / (Hours of operation per month)] (1-Control Efficiency)

*If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.

ii. Compliance with the opacity limits shall be demonstrated through the following methods:

The permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** during all periods.

iii. See Section D.

3. Testing Requirements:

Pursuant to 401 KAR 59:005 Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the division.

4. Specific Monitoring Requirements:

a. The total monthly processing rate.
b. The hours per month of the operation of the unit(s).
c. Observations of visible emissions from each emission points shall be made monthly. If visible emissions are seen during the observation, Method 9 shall be used to determine the opacity.
d. Pressure drop shall be monitored daily when the units are in operation. If the pressure drop is not within the normal operating range, an inspection of the system shall occur.

5. Specific Recordkeeping Requirements:

a. The total monthly processing rate.
b. The hours per month of the operation of the unit(s).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. A log shall be kept of all emission observations. Notation in the monthly log shall be made of the following:
   i. Monthly observations of visible emissions during operation of associated equipment.
   ii. Observations of visible emissions during all periods of control equipment malfunction. If visible emissions are seen during the observation, Method 9 shall be used to determine the opacity.

d. A log shall be kept of all daily record of pressure drop of baghouse and the results of inspection when an inspection is performed.

6. Specific Reporting Requirements:
See Section F.

7. Specific Control Equipment Operating Conditions:
The control devices associated with each emission point shall be operated and maintained in accordance with the manufacturer's instructions.

8. Alternate Operating Scenarios:
None.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (02, 03) Carbonizing Furnaces

Description:

This emission point consists of 6 electrically operated carbonizing furnaces: four existing furnaces #441, #481, #482, #490, and two new furnaces #442, and #483. Pre-forms from the needling and cutting machines are carbonized in these furnaces before undergoing a second stage carbonization process in the infiltrating furnaces. The output rate of carbonized brake pre-forms is approximately 168 TPY. Three thermal oxidizers control the emissions of these furnaces. New furnace #442 is controlled by new thermal oxidizer #3 and existing thermal oxidizer #2 controls new furnace #483 and existing furnace 490. Construction commenced: September 10, 1998, January 26, 2001, and Year 2007.

Carbonizing Furnaces 441, 481, and 482 existing	Control Device, Thermal Oxidizer #1
Carbonizing Furnaces 490 existing, and 483 new	Control Device, Thermal Oxidizer #2
Carbonizing Furnaces 442 new	Control Device, Thermal Oxidizer #3

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.

401 KAR 63:060. List of hazardous air pollutants, petitions process, lesser quantity designations, and source category list. Applicable to hydrogen cyanide emissions.

1. Operating Limitations:

a. For the thermal oxidizers, the permittee must:
   i. Demonstrate initial compliance for each thermal oxidizer through performance tests;
   ii. Establish the operating limits for each thermal oxidizer during performance testing; and,
   iii. Meet the operating limits at all times after establishing them.

b. The permittee shall operate the associated thermal oxidizers at all time while the carbonizing furnaces are in operation.

Compliance Demonstration: Pursuant to 401 KAR 50:055, records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3, opacity shall not exceed 20%.

b. Pursuant to 401 KAR 59:010, Appendix A, The emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

process weight rate (in units of tons/hr).
For process rates up to 1,000 lbs/hr: $E = 2.34$
For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

Compliance Demonstration Method:

This affected facility shall be assumed to be in compliance with the above opacity and mass standards due to the nature of furnace operation.

c. See Section D.

3. Testing Requirements:

a. Pursuant to 401 KAR 59:005 Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted for the new thermal oxidizer #3 (serving new carbonizing furnace 442) and existing thermal oxidizer #2 (serving existing carbonizing furnace 490 and new carbonizing furnace 483) to determine the VOCs destruction efficiency and the relevant chamber temperature no later than 180 days after the permittee receives the final permit. See also Section G (4)(e).

b. For the existing thermal oxidizer #1, stack testing shall be done at least once during the lifetime service of the thermal oxidizers to determine the VOCs destruction efficiency and the relevant chamber temperature.

4. Specific Monitoring Requirements:

a. The permittee shall monitor hydrogen cyanide emissions by the following equation:

$$E = P \times EF$$

Where E is hydrogen cyanide emissions in lbs/hr, P is averaged process weight in tons/hr and EF is the KYEIS hydrogen cyanide emission factor in lbs/ton of process weight.

b. The permittee shall monitor the chamber temperature of each thermal oxidizer on a continuous basis when carbonizing furnaces are in operation.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of hydrogen cyanide emissions monthly.

b. Thermal oxidizer combustion chamber temperature shall be recorded on a continuous basis when carbonizing furnaces are in operation.

c. Records of repair and maintenance shall be kept for each thermal oxidizer.

6. Specific Reporting Requirements:

a. The permittee shall identify, record, and submit a written report to the Division's Florence Field Office of each instance in excess of 3 hours during which the average chamber temperature of the thermal oxidizer used to control emissions from an affected facility remains more than 28° C (50° F) below that at which compliance was demonstrated during the most recent measurement of thermal oxidizer efficiency. If no

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

such periods occur, the permittee shall state this in a report to be submitted **semiannually**.

b. See Section F.

7. Specific Control Equipment Operating Conditions:

The temperature of the thermal oxidizer combustion chamber averaged over any 3 consecutive hours shall be no more than 28^{o}C (50^{o}F) below the average chamber temperature recorded during the most recent performance test which demonstrates compliance

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (04,05,06) Boiler #1, Boiler #2, and Boiler #3

Description:

Each of three boilers is a Cleaver Brooks Model CB-LE 1700, natural gas fired boilers, boiler #1 and boiler #2 have a rated capacity of 27.8 MMBtu/hour, and new boiler #3 has a rated capacity of 55.6 MMBtu/hour. All three boilers have low NO_X burners that control NO_X emissions with 42% efficiency. Construction commenced: September 10, 1998, October 1, 2000, and Year 2007.

03 (04) 12 Infiltration Furnaces #501-#512

Description:

This emission point consists of 12 electrically operated infiltration furnaces: 8 existing furnaces #501-#508, and 4 new furnaces #509-#512. Carbon pre-forms carbonized in the initial stage (carbonizing furnaces) are processed in these CVI (carbon vapor infiltration) furnaces. The output rate of brake pre-forms is approximately 45 TPY each. The effluent gas stream is directed to the boiler. Construction commenced: (#501-#508) September 10, 1998, and (#509-#512) Year 2007.

Start-up Venting Description - During the furnace start-up, the effluent gas is initially directed to the atmosphere for a short period of time. The venting is timed at 12 seconds during the inlet gas ramping of infiltration furnaces.

APPLICABLE REGULATIONS:

For 3 boilers: 401 KAR 59:015. New indirect heat exchangers, applies to particulate matter and sulfur dioxide emissions from the combustion of natural gas.

40 CFR 60 Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

For 12 infiltration furnaces: None.

1. Operating Limitations:

a. The permittee shall operate the associated boilers at all time while the infiltration furnaces are in operation.

b. The permittee shall record the length of each start-up venting and calculate VOC and HAP(s) emissions.

2. **Emission Limitations:**

a. For existing boiler #1:

i. Pursuant to Regulation 401 KAR 59:015, Section 4(1)(c), emission of particulate matter from each boiler shall not exceed 0.44 lb per MMBtu.

ii. Pursuant to Regulation 401 KAR 59:015, Section 5(1)(c)(1), emission of sulfur dioxide from each boiler shall not exceed 1.972 lb per MMBtu.

b. For existing boiler #2:

i. Pursuant to Regulation 401 KAR 59:015, Section 4(1)(c), emission of particulate matter from each boiler shall not exceed 0.374 lb per MMBtu.

ii. Pursuant to Regulation 401 KAR 59:015, Section 5(1)(c)(1), emission of sulfur dioxide from each boiler shall not exceed 1.483 lb per MMBtu.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. For new boiler #3:
   i. Pursuant to Regulation 401 KAR 59:015, Section 4(1)(c), emission of particulate matter from each boiler shall not exceed 0.318 lb per MMBtu.
   ii. Pursuant to Regulation 401 KAR 59:015, Section 5(1)(c)(1), emission of sulfur dioxide from each boiler shall not exceed 1.116 lb per MMBtu.

d. Pursuant to Regulation 401 KAR 59:015, Section 4(2), the opacity of visible emissions shall not exceed twenty (20) percent (for all 3 boilers).

Compliance Demonstration:

While burning natural gas and/or furnaces gas stream, 3 boilers are considered to be in compliance with particulate matter, sulfur dioxide and opacity standards.

e. See Section D.

3. Testing Requirements:

Pursuant to 401 KAR 59:005 Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the division.

4. Specific Monitoring Requirements:

a. To provide reasonable assurance that the particulate, sulfur dioxide, and visible emission limitations are being met pursuant to 401 KAR 59:015, the permittee shall monitor the monthly amount and type of fuel (natural gas and/or furnace gas stream) burned in each boiler.
b. The permittee shall monitor the length of each start-up venting and calculate VOCs and HAP(s) emissions.

The permittee shall also monitor the relevant operating parameters, including:

c. The monthly rate and type of process weight.
d. The monthly total hours of operation
e. The permittee shall monitor VOCs and HAP(s) emissions by the following equation:

$$E = P \times EF$$

Where E is VOCs and HAP(s) emissions in lbs/hr, P is averaged process weight in tons/hr and EF is the KYEIS VOCs and HAP(s) emission factor in lbs/ton of process weight.

5. Specific Recordkeeping Requirements:

a. To provide reasonable assurance that the particulate, sulfur dioxide, and visible emission limitations are being met pursuant to 401 KAR 59:015, the permittee shall keep records of the monthly amount and type of fuel burned in each boiler.
b. The permittee shall record the length of each venting and calculate VOCs and HAP(s) emissions.

The permittee shall keep records of the relevant operating parameters, including:

c. The monthly rate and type of process weight.
d. The monthly total hours of operation
e. The VOCs and HAP(s) emissions.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. **Specific Reporting Requirements:**
See Section F.

7. **Specific Control Equipment Operating Conditions:**
None

8. **Alternate Operating Scenarios:**
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (06) 4 Cooling Towers

Description:

This emission point consists of three existing and one new non-contact cooling towers (each cooling tower has 2 components). The amount of process water to each tower is about 118-132 thousand-gals of water/hour. The emissions from these towers are fugitive emissions. Construction commenced: September 10, 1998, January 26, 2001, and Year 2007.

APPLICABLE REGULATIONS:

401 KAR 63:010 – Fugitive Emissions.

1. Operating Limitations:

No person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions are specified in 401 KAR 63:010, Section 3.

2. Emission Limitations:

See Section D.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall monitor the relevant operating parameters, including:

a. The monthly rate of water processed.
b. The monthly total hours of operation.
c. The permittee shall monitor any maintenance, repairs, and actions taken to prevent emissions.

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the relevant operating parameters, including:

a. The monthly rate of water processed.
b. The monthly total hours of operation.
c. The permittee shall keep records of any maintenance, repairs, and actions taken to prevent emissions.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (09) Emergency Diesel Generator

Description:

This emission point is a 341 hp, diesel-powered generator, which is used for the orderly shutdown of the furnace in case of power failure. The projected maximum hours of operation are 500 hours/year. Construction commenced: February 3, 2000.

APPLICABLE REGULATIONS:

None

1. Operating Limitations:

See section D.

2. Emission Limitations:

See section D.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall monitor the relevant operating parameters, including:

a. The monthly rate and type of fuel used.
b. The monthly total hours of operation.

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the relevant operating parameters, including:

a. The monthly rate and type of fuel used.
b. The monthly total hours of operation.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	Description	Generally Applicable Regulation
1.	08 (10) Emergency Diesel Pump Engine	None
2.	Ultrasonic Cleaning	None
3.	Electric Drying Oven	None
4.	Anti-Oxidant Coating	None
5.	2 Electric Vacuum Annealing Furnaces	None
6.	Nitrogen Scrubber	None
7.	Transfer and Storage System	401 KAR 63:015, 401 KAR 59:050
8.	Developmental Process Equipment	401 KAR 63:015
9.	Anti-Oxidant Coating – Two Spray Booths	401 KAR 59:010
10.	NDT Line – three booths	None
11.	Paint Line - Booth 1	None
12.	Paint Line - Booth 2	None
13.	Paint Line - Oven 1	None
14.	Paint Line - Oven 2	None
15.	A66 Coating and Curing	401 KAR 59:010
16.	Two Turning Machines	None
17.	Two Milling Machines	None
18.	Deburning Machine	None
19.	Shot Peen	None
20.	Needling/Cut Fiber Scrap	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 10, compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. **Emission Limitations:**
   a. The permittee shall limit source wide emissions of single Hazardous Air Pollutants (HAP) to 9 tons or less, and combined HAP to 22.5 tons or less, during any consecutive 12 months period. [401 KAR 52:030]
   Monthly records to demonstrate compliance with this limitation shall be maintained and the emissions of individual and combined HAPs shall be reported on a semi-annual basis. Individual and combined HAP emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month of individual and combined HAP emissions; subsequently, tons of individual and combined HAP emissions per rolling twelve-month period shall be recorded. In addition, these records shall demonstrate compliance with the individual and combined HAP emission limitation listed herein for the conditional major limitation. These records shall be maintained on site for a period of five years from the date the data was collected and shall be readily available.

   Compliance Demonstration Method:
   HAP emissions from the above affected facilities shall be calculated using the equation (i) below. Emissions are totaled source wide using the equation (ii) of this Section and compared with the limits set therein.

   i. HAP Emission (lb/hr) = (PW x EF x (1-control efficiency))

   Where, PW = process weight in SCC unit per hour
   EF = HAP emission factor (SCC unit) as found in the emissions inventory system or as provided in MSDS sheet

   ii. HAP Emissions; $HAP_j = \sum_{i=1}^{n} \left(HAP_j\right)_i$

   Where, HAP_j = HAP emission (i.e. TCE, toluene, etc.)
   $(HAP_j)_i$ = amount of HAP_j emitted at emission point "i".
   n = total number of emission points

   b. The permittee shall limit source wide emissions of VOCs to 90 tons or less, during any consecutive 12 months period. [401 KAR 52:030]
   Monthly records to demonstrate compliance with this limitation shall be maintained and the emissions of VOCs shall be reported on a semi-annual basis. VOCs emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month of VOCs emissions; subsequently, tons of VOCs emissions per rolling twelve-month period shall be recorded. In addition, t0hese records shall demonstrate

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

compliance with the VOCs emission limitation listed herein for the conditional major limitation. These records shall be maintained on site for a period of five years from the date the data was collected and shall be readily available.

Compliance Demonstration Method:
VOCs emissions from the above affected facilities shall be calculated using the equation (i) below. Emissions are totaled source wide using the equation (ii) of this Section and compared with the limits set therein.

i. VOC Emission (lb/hr) = (PW x EF x (1-control efficiency))

Where, PW = process weight in SCC unit per hour
EF = VOC emission factor (SCC unit) as found in the emissions inventory system or as provided in MSDS sheet

ii. VOC Emissions; $VOC_j = \sum_{i=1}^{n} \left(VOC_j\right)_i$

Where, VOC_j =VOC emission
$(VOC_j)_i$ = amount of VOC_j emitted at emission point "i".
n = total number of emission points

c. The permittee shall limit source wide emissions of NOx to 90 tons or less, during any consecutive 12 months period. [401 KAR 52:030]
Monthly records to demonstrate compliance with this limitation shall be maintained and the emissions of NOx shall be reported on a semi-annual basis. NOx emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month of NOx emissions; subsequently, tons of NOx emissions per rolling twelve-month period shall be recorded. In addition, these records shall demonstrate compliance with the NOx emission limitation listed herein for the conditional major limitation. These records shall be maintained on site for a period of five years from the date the data was collected and shall be readily available.

Compliance Demonstration Method:
NOx emissions from the above affected facilities shall be calculated using the equation (i) below. Emissions are totaled source wide using the equation (ii) of this Section and compared with the limits set therein.

i. NOx Emission (lb/hr) = (PW x EF x (1-control efficiency))

Where, PW = process weight in SCC unit per hour
EF = NOx emission factor (SCC unit) as found in the emissions inventory system

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

ii. NOx Emissions; $NOx_j = \sum_{i=1}^{n} \left(NOx_j\right)_i$

Where, NOx_j =NOx emission
$(NOx_j)_i$ = amount of NOx_j emitted at emission point "i".
n = total number of emission points

d. The permittee shall limit source wide emissions of PM/PM10 to 90 tons or less, during any consecutive 12 months period. [401 KAR 52:030]
Monthly records to demonstrate compliance with this limitation shall be maintained and the emissions of PM/PM10 shall be reported on a semi-annual basis. PM/PM10 emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month of PM/PM10 emissions; subsequently, tons of PM/PM10 emissions per rolling twelve-month period shall be recorded. In addition, these records shall demonstrate compliance with the PM/PM10 emission limitation listed herein for the conditional major limitation. These records shall be maintained on site for a period of five years from the date the data was collected and shall be readily available.

Compliance Demonstration Method:
PM/PM10 emissions from the above affected facilities shall be calculated using the equation (i) below. Emissions are totaled source wide using the equation (ii) of this Section and compared with the limits set therein.

i. PM/PM10 Emission (lb/hr) = (PW x EF x (1-control efficiency))

Where, PW = process weight in SCC unit per hour
EF = PM/PM10 emission factor (SCC unit) as found in the emissions inventory system

ii. PM/PM10 Emissions; $PM/PM10_j = \sum_{i=1}^{n} \left(PM/PM10_j\right)_i$

Where, $PM/PM10_j$ = PM/PM10 emission
$(PM/PM10_j)_i$ = amount of $PM/PM10_j$ emitted at emission point "i".
n = total number of emission points

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place (as defined in this permit), and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030 Section 3(1)(f) 1a and Section 1a-7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

3. In accordance with the requirements of 401 KAR 52:030 Section 3(1) f the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030 Section 22. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:
   a. Identification of each term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial Drive
Suite #110
Florence, KY 41042

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee. If a KYEIS emission survey is not mailed to the permittee, then the permittee shall comply with all other emission reporting requirements in this permit.

11. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:
    a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
        (1) The size and location of both the original and replacement units; and
        (2) Any resulting change in emissions;
    b. The potential to emit (PTE) of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
    c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
    d. The replacement unit shall comply with all applicable requirements; and
    e. The source shall notify Regional office of all shutdowns and start-ups.
    f. Within six (6) months after installing the replacement unit, the owner or operator shall:
        (1) Re-install the original unit and remove or dismantle the replacement unit; or
        (2) Submit an application to permit the replacement unit as a permanent change.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a-2 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-5 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030 Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030 Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 6 and 7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030 Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030 Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-12-b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038 Section 3(6) [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030 Section 11(3)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:030, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030 Section 12].

b. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030 Section 8(2)].

3. Permit Revisions

a. Minor permit revision procedures specified in 401 KAR 52:030 Section 14(3) may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:030 Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points EP2 (2 Carbonizing Furnaces #442 and #483), EP3 (1 Boiler #3 and 4 Infiltration Furnaces #509-#512), EP4 (1 Cooling Tower) in accordance with the terms and conditions of this permit.

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   (1) The date when construction commenced.
   (2) The date of start-up of the affected facilities listed in this permit.
   (3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the draft permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. For EP2 (2 Carbonizing Furnaces #442 and #483), testing must also be conducted in accordance with General Provisions G.5 of this permit.

f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements
For EP2 (2 Carbonizing Furnaces #442 and #483) only:

   a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:030 Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   (1) An emergency occurred and the permittee can identify the cause of the emergency;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) The permitted facility was at the time being properly operated;
(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
(4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.
(5) Notification of the Division does not relieve the source of any other local, state or federal notification requirements.

b. Emergency conditions listed in General Provision G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030 Section 23(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030 Section 23(2)].

8. Ozone depleting substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None